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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,028

05/02/2006

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EXAMINER

NGUYEN, TRAN N

ART UNIT

PAPER NUMBER

2834

MAIL DATE

DELIVERY MODE

12/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,028	GOTTMANN ET AL.	
	Examiner	Art Unit	
	Tran N. Nguyen	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/30/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23 is/are allowed.
- 6) ☒ Claim(s) 11 and 13-22 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/22/07 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Withdraw Previous Final Rejection

Applicant's arguments in the appeal brief, filed on 10/30/07, with respect to Claims 11-23 have been carefully considered. The Examiner concurs with the applicant's remark that the electromagnetic interference suppression containing RF bead ferrite taught by Parker could not handle the current drawn by the electric motor. The Examiner thereby withdraws the previous Final Rejection, filed on 6/27/07, but these arguments are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 11 and 13-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kaeufl et al (US Pub 2003/0001448)** in view of **Haag et al (US 6,232,684)**.

Kaeufl discloses an electric drive unit are used in diverse application fields in a motor vehicle field, various movable parts of the motor vehicle such as seats, window lifters, sliding sunroofs, etc., are operated by means of electric drive units. Electric drive units consist of a DC motor for generating and providing electrical drive power, and of an electronic module for controlling/driving such as speed and power regulation of the motor (para [0001]). **Kaeufl** discloses the control circuit module (20) (figs 1-2, para [0015]) including a PCB (21) and mounted thereon are: a supply line with power components (22), circuit component (24) for controlling the speed, and an attenuation element (23), i.e., an anti-interference component (23), that is configured to attenuate electromagnetic interference signals generated in the motor by electromagnetic interference suppressing effects of the switching processes, i.e., commutation sparking or brush arcing, wherein the PCB (21) is obviously configured for later insertion of the

Art Unit: 2834

control circuit elements (22, 23,24) being mounted on the PCB (21) as SMD components by means of surface mounting (Figs 1-2, para [0015]).

Kaeufl substantially discloses the claimed invention, except for the limitations of the following:

the attenuation element is a common mode ferrite component, and attenuation element is disposed close to the housing of the motor.

Haag teaches a DC motor having an actuator provided with an attenuation element (78, 80) containing a ferrite material for surface mounting on a circuit board (84) (col 5 lines 9-126). **Haag** teaches a motor drive unit having PCB (84) with circuit configuration including ferrite component as an attenuation element (78, 80) for an EMC inference suppression being disposed thereon the PCB (figs 1-2, and 5-7), wherein such electromagnetic interference often occurs via electrical arcing or sparking between the brush and commutator of the motor (col 1, lines 15-20). Haag also teaches the device having a motor drive unit having a housing (figs 1-2, 5-7) to accommodate the PCB with the attenuation element and the motor within said housing. Those skilled in the art would realize that such common housing for the motor and its control circuit module would require relatively short internal electrical connection between electric motor and electronic module within the common housing as an integrated unit resulting in enhancing electrical characteristics, high reliability and operating life while requiring a compact installation space.

Particularly, **Haag's** Figures 1-2 and 5 and col. 4 line 46 to col. 5 line 27, Haag discloses a printed circuit board (PCB) (84) that is inserted in the motor housing (28) in close vicinity of the motor (34), which is placed in the overall casing (22). Haag particularly discloses that the PCB (84) having filters (78, 80, 82) connected in the power supply circuit for the motor. This is interpreted as part of the motor control circuit because the PCB (84) wire traces connected to the filters (78, 80, 82) to define a circuit that control and filter the motor's high frequency noise operating current to prevent it from shunting back to the motor. Such circuit board arrangement would enhance electrical reliability while requiring a compact installation space. Thus, the rejection relied on **Haag** prior art reference is proper. Furthermore, for the argumentative point of view, even though **Haag** does disclose a PCB having a motor control circuit, but Haag does disclose a PCB located within the motor housing and at vicinity of the motor. This is the

essential teaching of PCB placement for enhance electrical reliability while requiring a compact installation space. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981)*. In this instant case, the Examiner's position is NOT suggesting to bodily incorporated whatever kind of **Haag's** PCB into the structure of the **Kaufl** primary reference or vice versa. The Examiner's position is that since **Kaeufl** does disclose a PCB with motor control circuit, as in para. [0015], and **Haag** teaches a PCB being located within the motor housing and close to the motor for enhance electrical reliability and compact installation space.

Thus, and it would have been obvious to one skilled in the art at the time the invention was made to modify the module of a drive unit to have a common housing that encloses the motor and the PCB with the attenuation element, as taught by **Haag**. Doing so would enable relatively short internal electrical connection between electric motor and electronic module within the common housing as an integrated unit resulting in enhancing electrical characteristics, high reliability and operating life while requiring a compact installation space.

Allowable Subject Matter

2. **Claim 12** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. **Claim 23** is allowed.

Conclusion

As stated at the beginning of this Office Action, Applicant's arguments with respect to the Final Office Action are found persuasive. The Examiner thereby withdraws the Final Office Action of 6/27/07, but these claims are moot in view of the new ground(s) of rejection.

According to MPEP § 706.07(a), and as shown by the record, the applicant did file an amendment on 5/22/07 for amending claims 11-23, as the result of and the response to the First

Action of 5/04/07. Therefore, this Office Action is properly made FINAL because the claims were amended via amendment, filed on 5/22/07, which necessitated the above new grounds of rejections, with respect to the First Office Action of 5/04/07.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is 571-272-2030 or via email at **Tran.Nguyen@USPTO.gov**

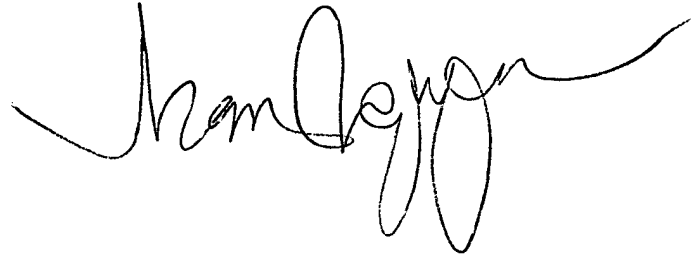
The examiner can normally be reached on 7:00 AM - 4:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the Examiner can be reached via email. The applicant is advised that all communications via email are unofficial, emailing is only an alternative way to establish contact with the Examiner.

If attempts to reach the examiner by telephone or email are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. (**Note: Use this Central Fax number 571-273-8300 for all official response.**)

Do **not** use the Examiner's RightFax number without informing the Examiner first because, according to the USPTO policy, any document being sent via RightFax is treated as unofficial response and will not be officially dated until it is routed to the Central Fax.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tran N. Nguyen
Primary Examiner
Art Unit 2834

A handwritten signature in black ink, appearing to read 'Tran N. Nguyen', with a long, sweeping horizontal line extending to the right.